

ABSTRACT OF THE DISCLOSURE

[0046] An implantable neural stimulation system, such as an auditory Fully Implantable System (FIS), includes: (1) an implanted device capable of providing desired tissue or nerve stimulation; and (2) a remote control unit that provides a mechanism for readily controlling the implant device, i.e., for selectively adjusting certain stimulation parameters associated with the tissue stimulation of the implanted device. The remote control unit uses a first signal path to send signals to the implant device, and a second signal path to receive signals from the implant device. The combination of these two signal paths provides a full-duplex channel between the remote control unit and the implant device through which appropriate control and status signals may be sent and received. In one embodiment, the first signal path comprises an audio signal path through which audio control signals, e.g., a tone sequence or a 32-bit word FSK modulated between 300 and 1200 Hz, are sent; and the second signal path comprises a RF signal path through which a BPSK, QPSK or FM modulated RF signal is received. The full-duplex channel allows operation of the remote control unit, i.e., allows signals to be successfully sent to and received from the implant device, from as far away as 45-60cm from the implant device.

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